4

The Development Scenario and Focus Areas

GUIDING SUCCESSFUL REVITALIZATION

The recommended development scenario for achieving the SW Ecodistrict vision is informed by the neighborhood and environmental frameworks presented in Chapters 2 and 3. The scenario recommends a phased strategy that includes rehabilitating some facilities and repurposing others, infilling vacant parcels and complete redevelopment. Combined, these changes repair the urban grid and balance the mix of uses and density necessary to support a revitalized, urban community in the heart of the nation's capital.

The symbiotic relationship between the neighborhood and environmental frameworks supports the development of a high-performance sustainable community. Efficient district energy, water, and waste management systems combine to support a high performance built environment. To achieve efficiencies in these systems, a diverse community of residents, workforce, and visitors, who have different resource demands throughout the day and evening is needed. To attract such a diverse community, the area must be a mixed-use, walkable and transit-oriented neighborhood.

While aspirational, the development scenario anticipates the realities of implementation. It is divided into four Focus Areas and designed for flexibility. Without displacing federal agencies, improvements can be made as federal space needs change, buildings are modernized, or opportunities arise to leverage federal, local, and private funds. Inevitably, as individual improvements are made, the design and the overall land mix may vary, but the basic philosophy of the plan will remain.

The SW Ecodistrict will become a vibrant, sustainable mixed-use community and showcase of possibilities. The area will demonstrate sustainable best practices, high performance building and landscape design, integrated safety and security measures, and prove that district-scale strategies yield the greatest environmental and economic benefits.

The Development Scenario

THE DEVELOPMENT SCENARIO

The development scenario represents the physical design scheme that best achieves the overall objectives without being prescriptive. It provides direction for rehabilitating, repurposing, or redeveloping buildings; developing underutilized sites to meet high performance building and landscape standards; and a range of infrastructure improvements. The approach started with an in-depth analysis of environmental and neighborhood elements at the building scale. These included:

- Current and proposed energy, water, and waste use;
- Historic value of the property;
- Relationship of the building to the street grid;
- Stormater management capacity; and
- Maximum development density.

Detailed modeling and analysis informed the development scenario to ensure that at build out, the Ecodistrict performs at its fullest potential.

To create the development scenario, the 2009 energy, water, and waste use of each property was collected. That information was compared with new development alternatives to determine the potential benefits. These included development capacity, the share of transit ridership, and sources and uses for energy, water, and waste. The development scenario was then adjusted through an iterative process to determine how best to maximize results. Buildings were placed into one of the four categories:

Rehabilitation - Existing buildings that will remain in the near future will require a degree of rehabilitation.

- **Light Rehabilitation** - Buildings that may be repurposed or redeveloped will be lightly rehabilitated in the near-term by improving lighting and water fixtures to reduce energy and water consumption.
- **Full Rehabilitation** - Buildings identified as permanent facilities of the Ecodistrict will be fully rehabilitated by upgrading windows, building skin envelopes, and mechanical systems.

Repurpose - Repurposing of some existing buildings involves fully rehabilitating the structure and changing the building's use. It may also involve adding height and increasing the building footprint and potentially transferring the building's ownership.

Infill - Infill development will occur on sites that are currently vacant or underutilized.

Redevelopment - Existing buildings that are inefficient or do not fully use their site may be razed and redeveloped.

The development scenario seeks to retain federal agencies within the District of Columbia in locations appropriate to their missions. The scenario looks to improve the efficiency of federal ownership of land and buildings and suggests opportunities to foster a greater mix of cultural, hotel, and residential uses. New development will supplement existing office workers to generate day, evening, and weekend activity and support neighborhood-serving convenience retail. New construction will provide the ability to rebuild the street grid to improve connections and enhance public space.

Some say the greenest building is the one already built. While this may be the case for individual facilities functioning at the highest level of efficiency, the SW Ecodistrict seeks to move beyond individual buildings and achieve sustainability at a district scale. While rehabilitating existing buildings will dramatically decrease energy and water use and improve efficiency of interior space, it is the repurposed, infill, redevelopment of sites and infrastructure improvements that will be catalytic in realizing the SW Ecodistrict vision.

DEVELOPMENT SCENARIO SUMMARY

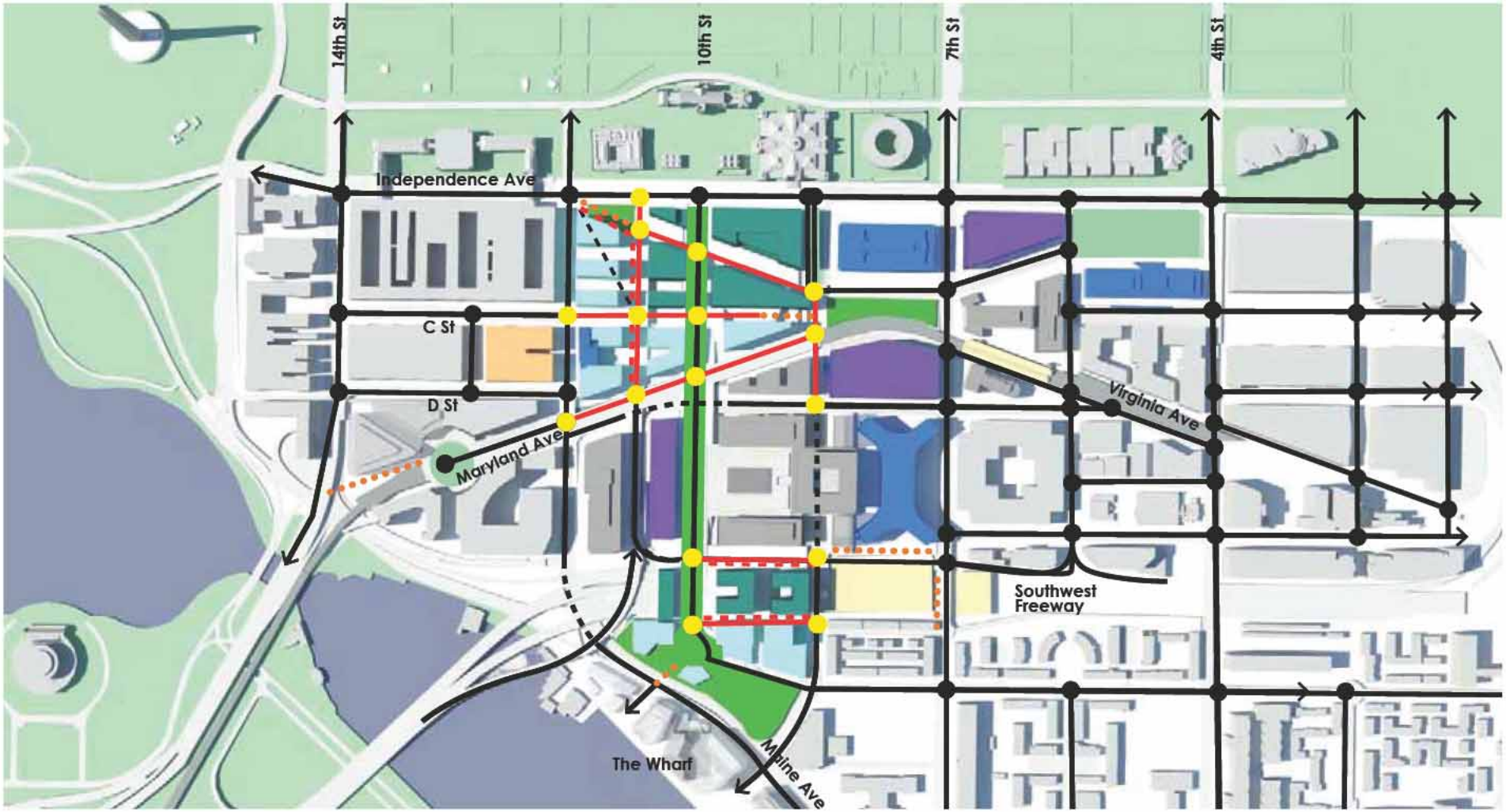
	Gross Sq. Ft.	Population[1]
Existing	10.8 Million	32,000
Rehabilitation - Full and Light [2]		+ 11,000
Repurpose	+ 600,000-1 Million	Will vary by use
Redevelopment	+3.0 Million	+ 6,000
Infill	+ 2.2 Million	+ 2,000
Potential Development Scenario [2]	14.7-15.1 Million	51,000

[1] Employees and residents

[2] Since lightly rehabbed buildings will be repurposed or redeveloped, the potential total is not cumulative.

Short term recommendations can be employed now without major investment in new infrastructure or significant redevelopment of buildings. However, there are progressive recommendations that will be catalytic and have exponential benefits to achieve the sustainability goals. These recommendations are summarized in the diagrams and project focus areas that follow.

The Development Scenario - Summary Plan



CREATING A HIGH PERFORMANCE COMMUNITY

Together, the rehabilitation, repurpose, infill, and redevelopment recommendations will transform the study area into a sustainable community. With the support of the neighborhood and environment framework recommendations, this development scenario creates a high performance neighborhood where land use and development decisions positively impact the environment, and improved infrastructure advances neighborhood amenities. Most importantly, the Ecodistrict will reintroduce both residents and visitors to an area now dominated by offices. Having a variety of users day and night is key to providing the vitality necessary to transform this area into an economically, socially, and environmentally successful community.

This relationship between the neighborhood and environmental frameworks is present throughout the SW Ecodistrict, including:

TRANSPORTATION INFRASTRUCTURE SUPPORTS LOWER CARBON EMISSIONS

Development decisions to break-up oversized superblocks and reconnect the street grid encourages walking, provides increased opportunities for retail, and decreases the overall greenhouse gas emissions produced within the Ecodistrict.

As streets and sidewalks are re-established or created, they will accommodate the necessary infrastructure to improve the generation and distribution of energy and the capture, treatment, and storage of stormwater for reuse. Streets will also be planted with trees and understory vegetation to improve urban ecology, increase pedestrian comfort, and further reduce carbon emissions.

DISTRICT WATER SYSTEM SUPPORTS GREEN INFRASTRUCTURE

By capturing, treating, and reusing all of the stormwater within the area, the Ecodistrict will reduce its dependence on potable water and lower operational costs. An overall lattice of green will support a lush setting composed of shaded streetscapes and elegant parks that will treat stormwater while providing human and environmental health benefits. These systems will provide connected habitat corridors to the Washington Channel and improve the visual character of the neighborhood. The introduction of quality public spaces and outdoor amenities will attract residents and visitors to the area, increasing the efficiency of the water system.

DISTRICT ENERGY SYSTEM SUPPORTS DIVERSITY OF LAND USE

The plan seeks to reduce energy use in existing and new buildings, generate and distribute energy efficiently, and use decarbonized fuel and supplement with renewable power. The existing central utility plant will provide heating and cooling for all federal and new or rehabilitated buildings. Microgrids will be established for federal and private development to allow for more flexible generation and distribution of renewable energy. Most buildings and infrastructure will support solar arrays and collect ground source heat.

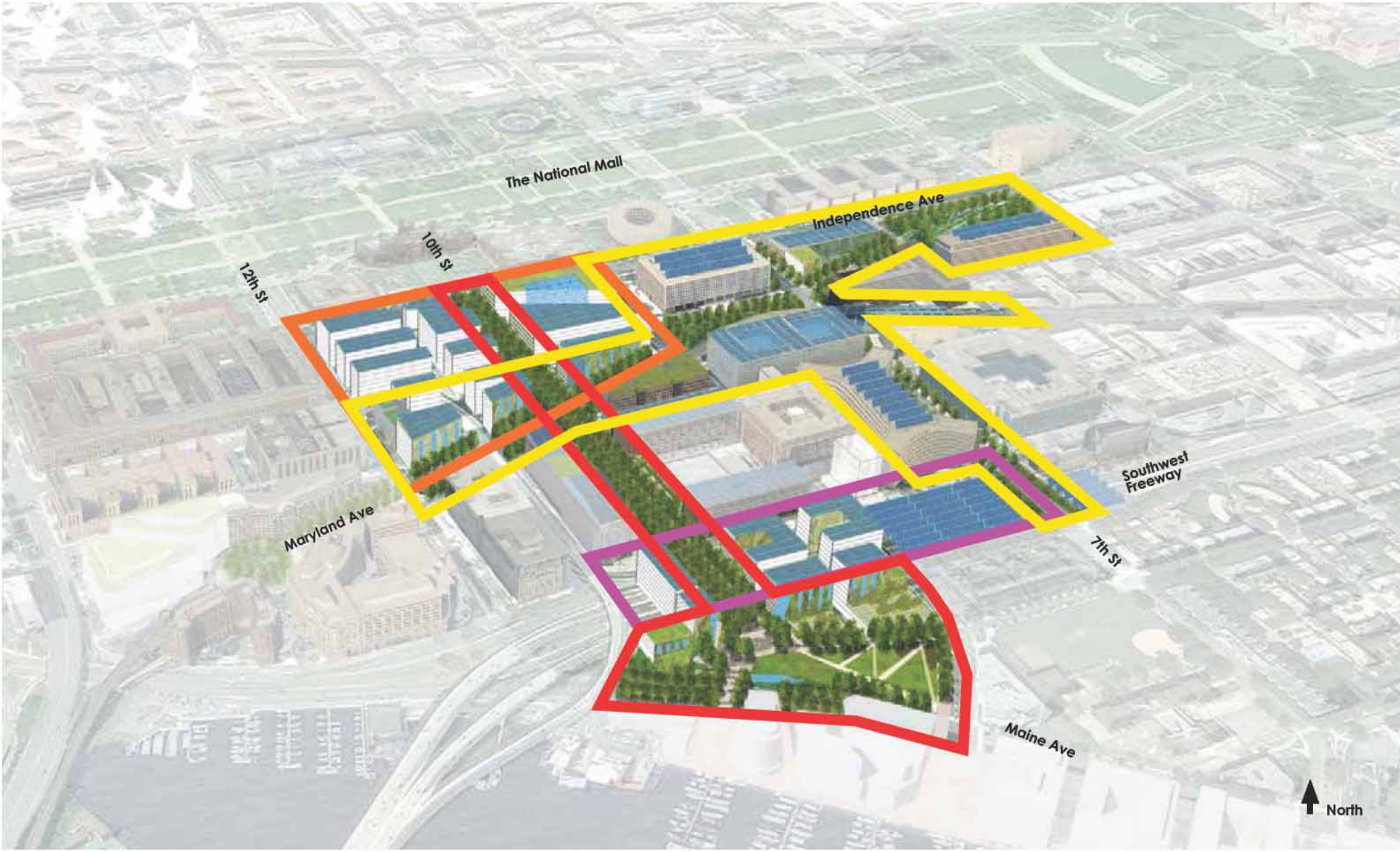
The most efficient energy systems require a diverse mix of land uses that distribute the energy demand throughout a 24-hour period. Adding residential, institutional, and evening activity to balance the overabundance of traditional office users will make this district energy system more financially viable, lower the carbon footprint of the Ecodistrict, and generally support a more vibrant community.

A mix of rehabilitation, repurposing, infill, and new development will provide the opportunity to deploy best practices in green building. The increase in density and use mix will substantially improve the operational efficiency of the existing central utility plant. Using LEED Platinum criteria as a baseline strategy will guide the placement, orientation, and construction of new buildings that employ innovative sustainable energy and water systems.

Implementing the development scenario at a district scale will support creation of an innovative new neighborhood at the heart of the nation's capital. By planning and implementing at a district scale, the resulting Ecodistrict will contribute to the region's environmental, social, and economic health.

Success can be measured quantitatively and qualitatively. Inevitably, as individual improvements are made the actual components and land mix may vary. Regardless of the final design, the land use, transportation, energy, water, and waste framework will guide the evolution of this area to be a sustainable and financial success.

Focus Areas


The National Mall
Independence Ave
10th St
12th St
Maryland Ave
Southwest Freeway
7th St
Maine Ave
North

Focus Areas

Four Focus Areas are used to organize recommendations into manageable and related efforts.

INDEPENDENCE QUARTER

A mixed-use community anchored by a national museum and a new headquarters for the U.S. Department of Energy.

MARYLAND AVENUE AND 7TH STREET CORRIDORS

An urban boulevard centered on a signature park and an expanded L'Enfant Station intermodal center.

10TH STREET CORRIDOR AND BANNEKER PARK

An inviting civic corridor connecting the National Mall and Smithsonian Museums to the southwest waterfront, anchored by an improved Banneker Park, a nationally significant cultural destination.

SOUTHWEST FREEWAY

A private mixed-use development atop the Southwest Freeway will connect Southwest neighborhoods, the waterfront, and the National Mall.

Each Focus Area includes a revitalization objective, a summary of considerations, a plan diagram, physical recommendations, and projected results. The Focus Area recommendations are organized by buildings, site, infrastructure, streets, and public space. Each recommendation includes:

- Summary descriptions of the parcel-specific proposal.
- Related or dependent projects – projects that are contingent upon another project
- Recommendations for less expensive near-term improvements could occur within five to ten years. Complex and more expensive long-term improvements could occur over the 20-year planning horizon.
- Potential partnerships to coordinate improvements, which may or may not include funding partners.

Independence Quarter

View of Independence Quarter from the northwest

(Top image) - Existing Conditions Study Model (2012)
(Lower image) - Recommended Development Scenario Study Model (2030)

REVITALIZATION OBJECTIVES

Redevelop the area between Independence Avenue and Maryland Avenue to create Independence Quarter, a new walkable neighborhood that integrates the qualities of the federal and local city within the monumental core.

Primary objectives for Independence Quarter:

- Reconnect the street grid;
- Balance the land use mix;
- Increase the efficient use of federal lands and buildings;
- Improve the setting for future cultural development;
- Establish a state-of-the-art headquarters building for the U.S. Department of Energy;
- Maximize district energy and stormwater practices; and
- Unlock the potential for 10th Street and Maryland Avenue as vibrant mixed use corridors.

TODAY

Today, approximately 20 acres south of Independence Avenue support the U.S. Department of Energy (DOE) headquarters, the Cotton Annex, the 12th Street Freeway ramp and tunnel, and several irregularly shaped, under-used parcels. The General Services Administration has jurisdiction of the land and buildings and the District of Columbia controls the streets. The Department of Energy's 1.8 million sq. ft. Forrestal Complex includes underground parking, a child care center, and a freestanding cafeteria facility for federal employees. The U.S. Department of Agriculture (USDA) Cotton Annex sits vacant.

Infrastructure barriers limit access by both car and foot. The I-395 access ramps and the CSX rail corridor limit mobility within the area. Streets have been eliminated in the creation of large superblocks lining each side of 10th Street (L'Enfant Promenade). The complex of monolithic buildings, excessive setbacks, and absence of ground floor activity makes it difficult to locate building entrances and creates an inhospitable environment.

CONSIDERATIONS

To realize Independence Quarter, several considerations must be addressed, including:

FEDERAL LAND AND FACILITIES

GSA and its tenants are working to significantly increase space efficiency of the federal real estate portfolio through physical improvements at individual facilities and through workplace management and operations. Several executive orders and Congressional directives are driving efforts to eliminate excess federal property and wasteful spending, conserve energy and water use, and reduce greenhouse gas emissions. At the same time, GSA is addressing changing agency missions and shifts in workforce technology and demographics. The concentration and configuration of federally owned property in Independence Quarter will help advance these directives.

Through the years DOE's Forrestal Complex has been incrementally improved to increase the energy and space efficiency. However, today's sustainability needs require much more. In response, GSA and DOE are evaluating the long term operational needs of the agency. GSA is also assessing the feasibility, costs, and benefits of disposing of underutilized assets.

While potential redevelopment of the DOE headquarters and the potential disposition of the surrounding parcels will address agency needs and help meet executive and legislative directives, it is important to retain ownership of an adequate amount of federal land to meet future federal office space requirements and retain cabinet agency headquarters within the area. To maximize government efficiency and ensure continuing operations of public service, it is important that federal agencies not be displaced and that real estate and facility operation decisions are not made in isolation. A comprehensive approach is critical to also maximize the use of federal land and its real estate value.

CULTURAL FACILITIES

The study area is gaining interest from potential memorial and museum sponsors because of its proximity to numerous Smithsonian Institution facilities, the National Mall, and The Wharf.

The National Women's History Museum is seeking Congressional approval to purchase federal land at or near the southwest corner of 12th Street and Independence Avenue. Congressional legislation was introduced to authorize the National Museum of the American Latino Commission to use the Arts and Industries Building and to develop an underground annex south of Independence Avenue for the museum. Additional sponsors are also exploring memorial or museum development within the Ecodistrict.

HISTORIC PRESERVATION

Early in the 20th century, the area was a walkable neighborhood of rowhouses and businesses. The streets and the blocks were altered with the introduction of the Urban Renewal Plan after World War II. Built in the 1930s, the Cotton Annex pre-dates urban renewal and has been determined eligible for the National Register of Historic Places (NRHP). While the L'Enfant Plan of Washington is also listed in the NRHP, the portion of Virginia Avenue between 9th Street and Independence Avenue does not contribute because the avenue was abandoned and views to the Washington Monument blocked. If restored, its non-contributing status could be re-evaluated.

Although 10th Street is a contributing element of the L'Enfant Plan, the view corridor between the Smithsonian Castle and the waterfront is non-contributing because the view was blocked with construction of the Forrestal Complex in 1970. The Forrestal Complex is nearing the threshold for consideration but has not yet been fully evaluated for listing in the NRHP. However, the DC State Historic Preservation Office has indicated that it considers restoration of the view corridors more important than preservation of the Forrestal Complex if it is ultimately determined eligible for the NRHP. Redeveloping the Forrestal Complex will reestablish Virginia Avenue and its link between Reservation 113 and the Washington Monument, restore views between the Smithsonian Castle and the southwest waterfront, and reclaim the street grid and the block configuration of the L'Enfant Plan.

The federal government will be required to comply with the National Historic Preservation Act in the development of proposals to sell, alter, repurpose, or redevelop resources considered eligible for or listed in the NRHP.

RECOMMENDATIONS

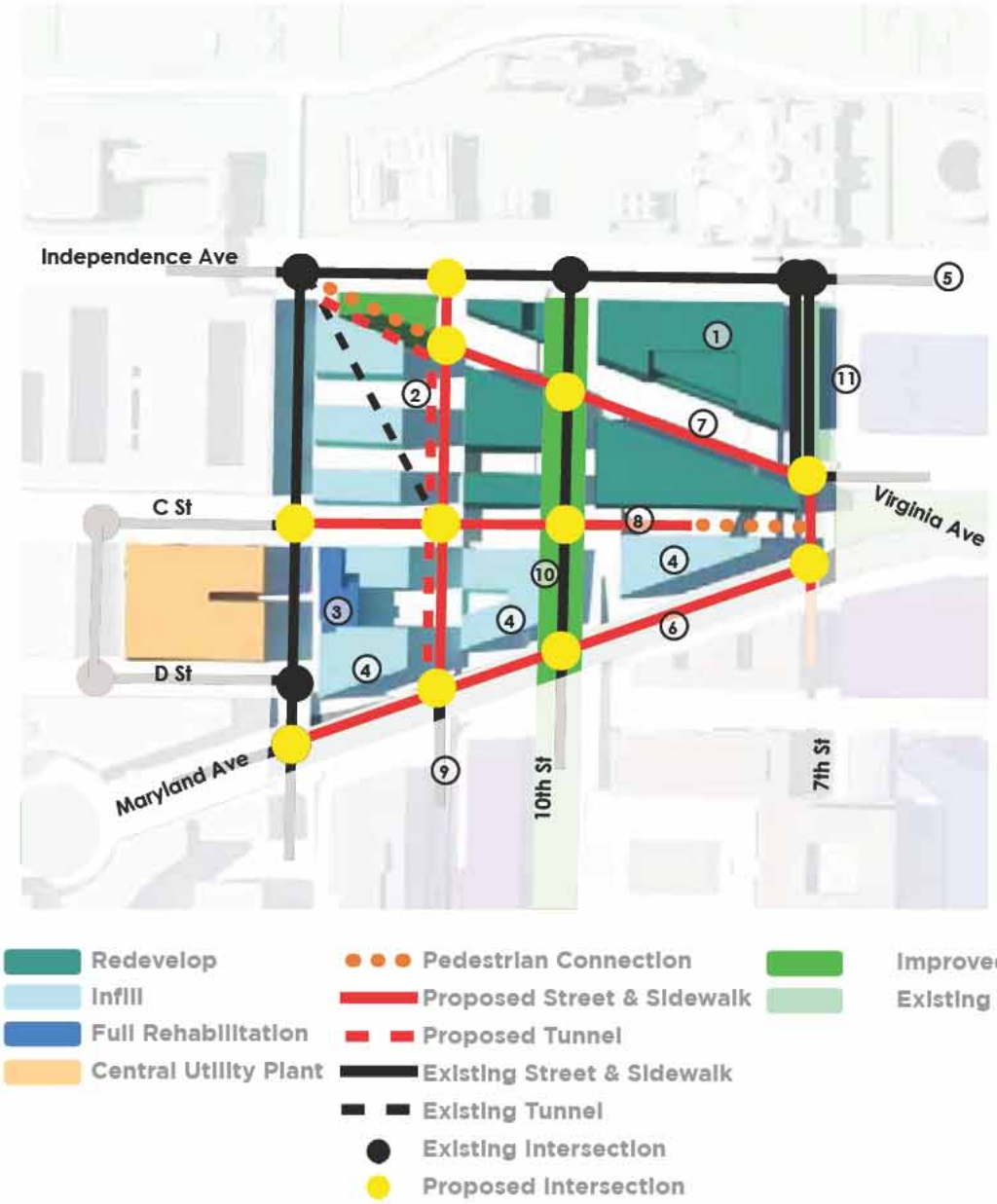
Redevelopment of the Forrestal Complex is the most significant catalyst to unlock the potential of the SW Ecodistrict. It offers the greatest opportunity to infuse the civic qualities of the monumental core with the vitality of downtown Washington, and to transform the area into a sustainable mixed-use neighborhood. Redevelopment of this area provides the opportunity to deck the 12th Street ramp, reconnect the street grid, and improve parcel configurations throughout the study area. It also presents the opportunity to employ a district stormwater system, an energy microgrid, and other best practices related to renewable energy. The matrix summarizes the recommendations for each parcel and street.

RESULTS

Independence Quarter will:

- Accommodate one or more parcels to support a new 1.8 million sq. ft. headquarters for the DOE.
- Yield more than two million sq. ft. of new development for residences, hotels, museums, and additional office.
- Provide a prominent site for the National Women's History Museum.
- Provide a new public park or plaza on Independence Avenue.
- Re-establish three streets that will provide up to 11 new intersections to improve walkability and accessibility.
- Increase efficiency of the central utility plant by improving the use mix to balance energy loads throughout the day.
- Provide the opportunity to construct a shared stormwater management system and microgrid infrastructure.
- Restore the L'Enfant Plan street network and reinstate important reciprocal views, including along Virginia Avenue to the Washington Monument from Reservation 113, and views between the National Mall and Banneker Park.

SUMMARY PLAN



INDEPENDENCE QUARTER - PROJECT RECOMMENDATIONS

Independence Quarter

		Summary Description	Phasing and Related Projects Near Term Projects (3-10 years) Long Term Projects (5-25 years) Coordination with Other Projects	Potential Partners* Federal - F District - D Private Sector - P Cultural - C
Building and Site Development				
1	Forrestal Complex	Redevelop the Forrestal Complex to increase square footage and the mix of uses to enhance sustainability. Accommodate a modern headquarters for the Department of Energy that supports its mission, provides more efficient government office space, and showcases high performing sustainable practices. Designate prominent locations for a nationally significant museum and memorial.	Near Term - Rehab for energy and water use reductions Long Term - Redevelop Site	F, D, P, C
2	12th Street Tunnel Air-Rights Development	Deck over the ramp to the 12th Street Tunnel with a mix of uses to include residential and/or hotel development. Realign the 12th Street ramp to establish an at-grade intersection at Maryland Avenue. Create a commemorative park fronting Independence Avenue between 11th and 12th Street. Consider incorporating the commemorative park into the design of the adjacent parcels (for example, the US Navy Memorial at Market Square on Pennsylvania Avenue, NW).	Coordinate with Forrestal Complex Redevelopment	F, D, P, C
3	Cotton Annex	Expand the Cotton Annex to maximize use of surrounding parcels and rehabilitate to improve space, energy, end water efficiency.	Coordinate with adjacent infill or redevelopment	F, D, P, C
4	GSA Parcels 1-3	Develop under used parcels along Maryland Avenue with a mix of uses, prioritizing residential development. Consider increasing the size of these parcels by aggregating with adjacent land when feasible.	See Maryland Ave Focus Area Potential to Coordinate with Forrestal Complex Redevelopment	F, D, P, C
Infrastructure, Streets, and Public Space				
5	Independence Avenue	Design buildings, public spaces, and streetscape to encourage pedestrian activity while respecting the civic qualities of the National Mall and its adjacent cultural institutions.	Coordinate with Forrestal Complex Redevelopment	F, D, C
6	Maryland Avenue	See Maryland Avenue Focus Area.	See Maryland Ave Focus Area Potential to Coordinate with Forrestal Complex Redevelopment	F, D, P, C
7	Virginia Avenue	Reestablish Virginia Avenue to create walkable blocks, improve access for all modes of travel, and reclaim important views and linkages between the Washington Monument and Reservation 113.	Coordinate with Forrestal Complex Redevelopment	F, D, P, C
8	C Street	Reestablish C Street between 9th and 12th Streets to improve mobility and provide access for daily functions such as building loading, parking, and service entries.	Coordinate with Forrestal Complex Redevelopment	F, D, P
9	11th Street	Reestablish 11th Street between Maryland and Independence Avenues to improve mobility and provide access for daily functions such as building loading, parking, and service entries.	Coordinate with Forrestal Complex Redevelopment	F, D, P
10	10th Street	See 10th Street Focus Area		
11	9th Street (north of Maryland Avenue)	Redesign 9th Street between Independence Avenue and Maryland Avenue with a park-like character that links Reservation 113 with the Smithsonian's Ripley Garden while retaining adequate access to the I-395 tunnel and adjacent buildings. The segment of the street between Independence Avenue and C Street should be phased in concert with the future redevelopment of the Forrestal Complex.	Coordinate with Forrestal Complex Redevelopment	F, D
	All Projects	Construct and connect infrastructure systems and buildings to generate, convey, collect, store, and distribute thermal energy and recycled water throughout the district. Design and orient building footprints to maximize natural light and air ventilation.		F, D, P, C

***Partners will coordinate improvements but may not always be funding partners.**

10th Street Corridor And Banneker

View of 10th Street, SW from the Mall

(Top image) - Existing Conditions Study Model (2012)
(Lower image) - Recommended Development Scenario Study Model (2030)

REVITALIZATION OBJECTIVES

Establish the 10th Street corridor and Banneker Park as a cultural destination serving as a contemporary extension of the National Mall. The corridor will infuse the vitality of downtown Washington between the Smithsonian museums and gardens and the southwest waterfront. The corridor's prominent location provides an opportunity to become an environmental showcase displaying the best of American culture and innovation.

Primary objectives for the 10th Street corridor and Banneker Park:

- Design 10th Street as a walkable, vibrant mixed-use cultural corridor;
- Create a setting along the corridor and at Banneker Park befitting a national cultural destination, to serve as an extension of the National Mall;
- Program the corridor for daily activity and for special exhibitions and events;
- Design the corridor to serve as the energy and water management spine of the Ecodistrict;
- Use the lower level of 10th Street to accommodate energy, water, and parking infrastructure; and
- Showcase state-of-the-art urban design and environmental practices to increase public awareness.

TODAY

10th Street, also known as L'Enfant Promenade, is an overscaled unfriendly pedestrian and vehicular corridor on axis with the National Mall and Banneker Park. An elevated park overlooks the southwest waterfront and sits on axis with the Smithsonian Castle. Although thousands of people work along the 10th Street corridor, the area remains desolate and devoid of significant street activity.

North of the rail line, the Forrestal Complex visually and psychologically isolates the study area from the National Mall and Smithsonian museums. South of the rail, 10th Street is lined with the U.S. Postal Service headquarters and the privately-owned L'Enfant Plaza office and hotel complex. These single-use superblock buildings provide little relation to the expansive 225-foot wide right-of-way. A portion of the street sits on sub-surface parking and a portion is elevated above active rail and the 10-lane Southwest Freeway, ramps, and related access roads. A labyrinth of stairs and ramps conceal

building entrances and obscure pedestrian routes. A lack of street trees or other vegetation, minimal seating, maintenance, and subpar building materials contribute to making the street unconducive for walking or social gatherings.

Banneker Park is an eight-acre elevated site that sits 45-feet above Maine Avenue. It overlooks the Washington Channel with sweeping vistas to East Potomac Park, the Potomac River, and beyond. This federal parkland is managed by the National Park Service. The park contains a plaza that sits atop a large, barren, sloping lawn containing vehicular access ramps and interpretive signage commemorating the contributions of Benjamin Banneker. Despite its location less than a half mile from the National Mall, poor pedestrian conditions and building edges cause the plaza to seem disconnected from the city and contribute to its lack of use. It is occasionally used by nearby workers at lunch and for those passing through to access the steep dirt slope path to the Maine Avenue Fish Market.

The Wharf, a new private waterfront development, will transform the southwest waterfront into a lively mixed-use neighborhood and regionally important destination. Just to the north, phased improvements to the L'Enfant Plaza are also underway. These developments will alter the mid-century Modern public spaces along 10th Street and the waterfront, and restrict views of the river from Banneker Park.

CONSIDERATIONS

To revitalize the 10th Street corridor and Banneker Park, several considerations must be addressed.

HISTORIC PRESERVATION

10th Street was once a neighborhood road that serviced the active shipping wharfs along the river. It was altered in the mid-20th century into a large plaza-like street (L'Enfant Promenade) and park (Reservation 719, now known as Banneker Park). The vistas associated with 10th Street and Banneker Park are identified as non-contributing elements in the NRHP nomination of the L'Enfant Plan of Washington. These non-conformities are a result of the altered street grid, block configurations, and artificial topographical changes that occurred as a result of the urban renewal and development of the Forrestal Complex. Although the intent of the *SW Ecodistrict Plan* is to re-establish the street grid and the block configuration of the L'Enfant Plan, further evaluation of the mid-century Modern buildings and landscape will be necessary to determine their historical significance.

L'Enfant Plaza, the private mixed-use complex fronting 10th Street, and the Overlook were designed by I.M. Pei and Dan Kiley. Both are renowned mid-century Modern designers. The buildings and landscapes of this era are nearing the threshold to be considered for inclusion on the NRHP. Although several nearby federal buildings and spaces have been determined eligible for the NRHP, neither the U.S. Postal Service nor 10th Street has been studied to determine eligibility. Initial research has been conducted to evaluate the potential eligibility of Banneker Park and the work of designer Dan Kiley; however, research is inconclusive at the time of this study's release. Additional evaluation is necessary to determine eligibility of these landscapes and buildings, and compliance with Section 106 of the National Historic Preservation Act. The federal government will be required to comply with this act in the development of proposals to sell, alter, repurpose, or redevelop resources considered eligible for, or listed in, the NRHP.

CULTURAL FACILITIES

Over the centuries the area evolved from a river plantation to a settlement of immigrants and freed African Americans, to the nation's first full-scale urban renewal project. A cultural heritage trail called River Farms to Urban Towers details the area's history. In 1971, the 10th Street Overlook was formally named Banneker Park in honor of Benjamin Banneker, the African American astronomer and mathematician who helped survey the boundaries of the new capital city. The Washington Interdependence Council (WIC), a memorial sponsor, obtained legislative authority in 1998 to place a national memorial to Benjamin Banneker in the District. WIC has advocated for locating this memorial at Banneker Park, along with a Math and Science Technology Institute and a clock tower, as well as a memorial along the length of 10th Street. In 1999, the National Capital Memorials Advisory Commission recognized Benjamin Banneker's important contributions but suggested that alternate sites in the District also be considered. The legislative authority for the memorial expired in 2005. New legislation has been introduced but not enacted at the time this plan was written.

Banneker Park is identified in the *Memorials and Museums Master Plan* as a prime candidate site for a national museum or memorial. The perception that the area is isolated from the National Mall has deterred museum sponsors from previously considering the site. However, with continued investment in the area, the site is gaining the attention of several museum and memorial sponsors.

ELEVATED 10TH STREET

The conditions below 10th Street and the topography of the park present opportunities and challenges. As an elevated street, there are opportunities to use the lower level of 10th Street to accommodate parking; and to house cisterns to store and treat stormwater for non-potable reuse. The topography of Banneker Park also presents opportunities to establish important views to the Potomac River and locate a sewer-mining facility into the hillside near the 12th Street ramp.

RECOMMENDATIONS

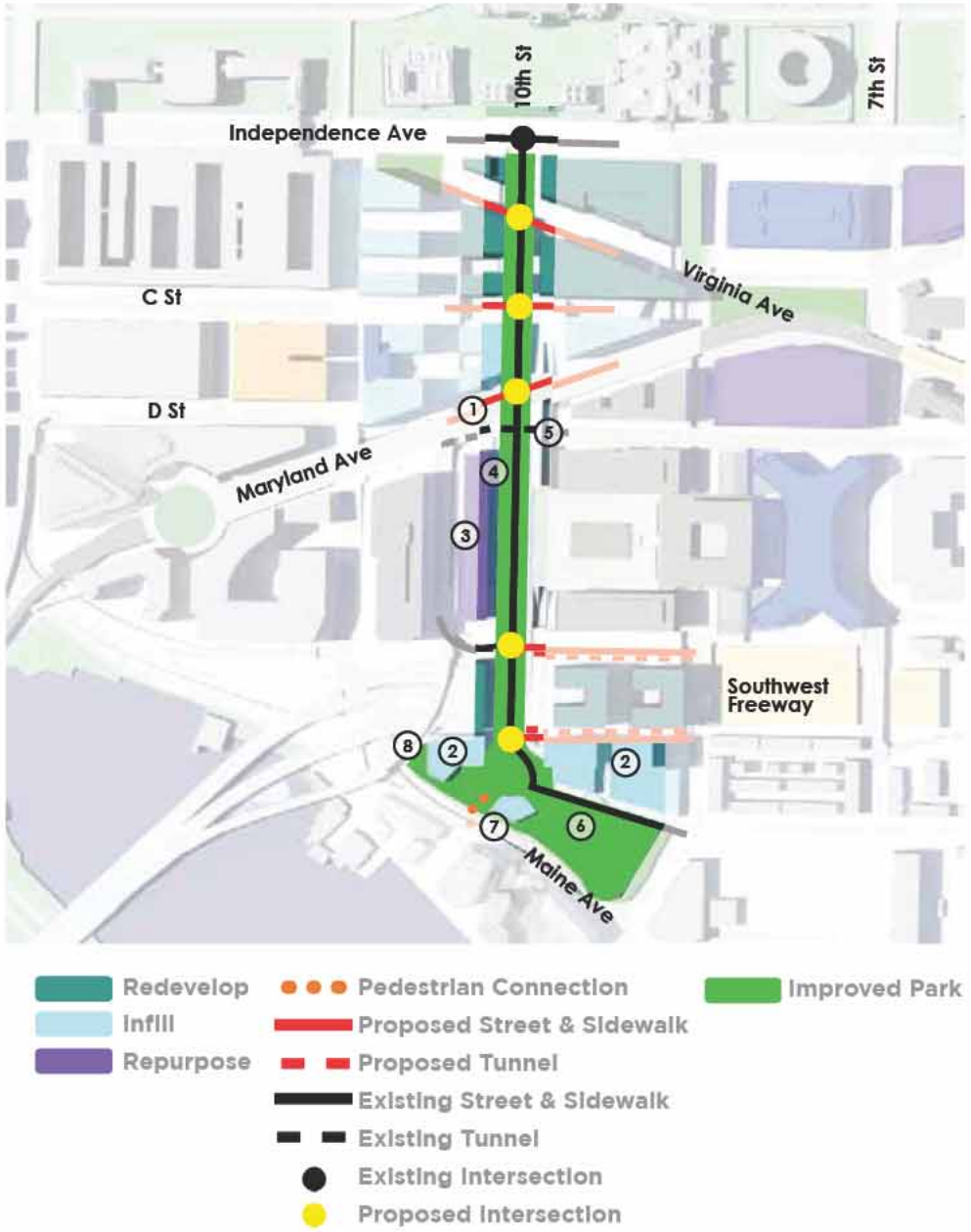
Near-term improvements to the 10th Street Streetscape and the Banneker Park landscape will signal the importance of 10th Street as a new cultural corridor. It will attract visitors with physical and programmatic improvements, and link the National Mall, Smithsonian museums and the southwest waterfront. These short-term improvements will position the street for long-term investment. In conjunction with the redevelopment of the Forrestal Complex, long-term streetscape and district water system improvements will establish the street as the sustainability spine of the SW Ecodistrict. A master cultural development plan for Banneker Park will provide the framework for build-out as sponsorship opportunities arise. The matrix summarizes the recommendations for each parcel and street.

RESULTS

10th Street Corridor and Banneker Park recommendations will:

- Improve the setting and establish locations for about one million sq. ft. of cultural facilities for up to four museums and three memorials.
- Improve more than eight acres of usable public space (1.7 acres along the 10th Street median and 6.5 acres at Banneker Park).
- Establish a distinguished walkable corridor in the monumental core.
- Reintroduce nature into the city and improve urban ecology.
- Store up to 94 million gallons of rainwater for reuse to reduce potable water use.
- Provide new infrastructure to expand service of the central utility plant and lower greenhouse gas emissions.
- Provide tour bus parking on the lower level of 10th Street.

SUMMARY PLAN



10TH STREET AND BANNEKER PARK - PROJECT RECOMMENDATIONS

		Summary Description	Phasing - Related Projects Near Term Projects (3-10 years) Long Term Projects (5-25 years) Coordination with Other Projects	Potential Partners* Federal - F District - D Private Sector - P Cultural - C
Building and Site Development				
1	Intersection of 10th Street and Maryland Avenue	Establish the intersection of 10th Street and Maryland Avenue as a civic destination featuring street-level retail, commemorative works, public art, kiosks, and newsstands.	Near Term - Define and implement interim improvements as part of long term reconstruction strategy	F, D, P, C
2	Banneker Park	Provide locations for nationally significant museums and memorials within a setting that embodies the character of the National Mall. Cluster new museums and educational facilities within the park to buffer Banneker Park from the Southwest Freeway. Establish a signature landscape along Maine Avenue to serve as a gateway between the National Mall and Southwest Washington. Locate and design buildings and the landscape to maximize reciprocal views to create an entry threshold and welcoming feature between the Smithsonian Castle, Banneker Park, and the Potomac River. Locate, mass, and configure buildings to respect the scale of nearby residential development. Design and program buildings to promote street life at the upper and lower-levels of Banneker Park on 10th Street and Maine Avenue. Improve pedestrian and bicycle access between Banneker Park, Maine Avenue, and East Potomac Park.	Near Term - Design and implement interim connection between Banneker Park and Maine Avenue in coordination with Waterfront redevelopment. Prepare a master site development plan for Banneker Overlook to define appropriate furture building sites at Banneker Park and related long term open space improvements and parking feasibility. If sub-surface parking at Banneker Park is determined appropriate, it should not limit, discourage, or prevent the development of future museums or commemorative works.	F, D, C
3	U.S. Postal Service	Accommodate street-level retail, educational, and cultural uses along the USPS building's 10th Street frontage without impacting the lobby on the ground floor. Rehabilitate the building to improve space and energy efficiency. When Maryland Avenue is constructed, incorporate a civic use at the intersection of 10th and Maryland Avenue without impacting USPS building operations or security. If the USPS ever relocates its headquarters, consider repurposing the building	Near Term - Develop interim street-level improvements in coordination with 10th Street redesign	F, D, P, C
Infrastructure, Streets and Public Space				
4	10th Street	Anchor 10th Street with cultural and institutional uses housed in signature public buildings. Create a green corridor that extends the civic qualities of the National Mall to the waterfront with a series of flexible and distinguished civic spaces. Narrow the street to allow for maximum building building heights and build-to-lines that improve pedestrian scale, are compatible with adjacent uses, and accommodate water management and multi-modal transportation systems. A 140 foot right-of-way was used in the modeling of the development scenario concept. Enliven the corridor with buildings, pavilions, and kiosks that contain retail, cultural, institutional, or public uses. Prioritize the corridor for pedestrians, bicyclists, and transit. Design the lower- and upper-level of 10th Street and surroundings landscapes to incorporate a bio-retention system that conveys, cleans, and stores rainwater for reuse. Design the lower-level of 10th Street to accommodate tour bus parking. Locate and design potential underground parking and associated vehicular circulation to prevent buses from motoring through adjacent residential neighborhoods.	Near Term - Develop interim streetscape enhancements Long Term - Implement re-design of 10th Street in coordination with redevelopment of Forrestal Complex, Post Office site, Maryland Avenue, L'Enfant Plaza improvements, and SW Freeway Air-rights redevelopment	F, D, P, C
5	D Street	Improve vertical connectivity between D Street and elevated 10th/11th Streets with an attractive, pedestrian-friendly connection.	Coordinate with 10th Street Near and Long Term improvements	F, D
6	G Street	Improve pedestrian access at the intersection of G and 9th Streets. Restrict buses from motoring through the adjacent residential neighborhood.	Coordinate with Banneker Park improvements	F, D, P, C
7	Maine Avenue	Design and program signature buildings, structures, and landscapes along Maine Avenue to respect the view corridors to the Washington Monument, strengthen the street wall, and activate the street.	Coordinate with Banneker Park improvements	F, D, P, C
8	Sewer Mining Facility	Ensure that the design of the utility system at Banneker Park does not impact views to the Washington Monument or any future cultural facility.	Coordinate with Banneker Park improvements	F, D, P, C
	All Projects	Construct and connect infrastructure systems and buildings to generate, convey, collect, store, and distribute thermal energy and recycled water throughout the district. Design and orient building footprints to maximize natural light and air ventilation.		F, D, P, C

***Partners will coordinate improvements but may not always be funding partners.**

PRELIMINARY DESIGN CONCEPTS

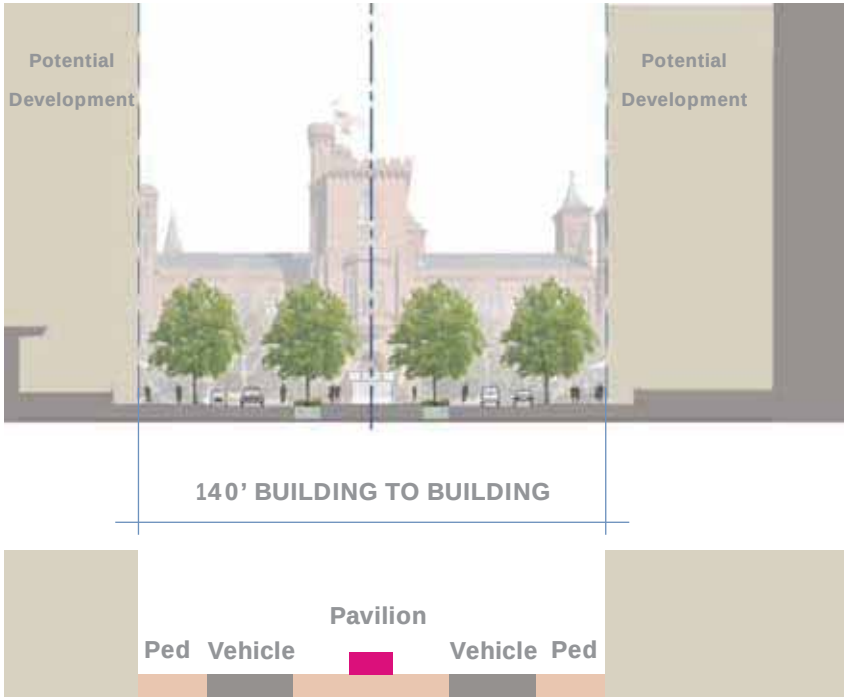
10TH STREET CORRIDOR

The SW Ecodistrict Task Force has begun to study a range of streetscape alternatives that could help achieve public space programming and design goals for 10th Street. These diagrams, illustrating a portion of the corridor, show a range of approaches and will be studied and developed in the next phase of work.

EXISTING

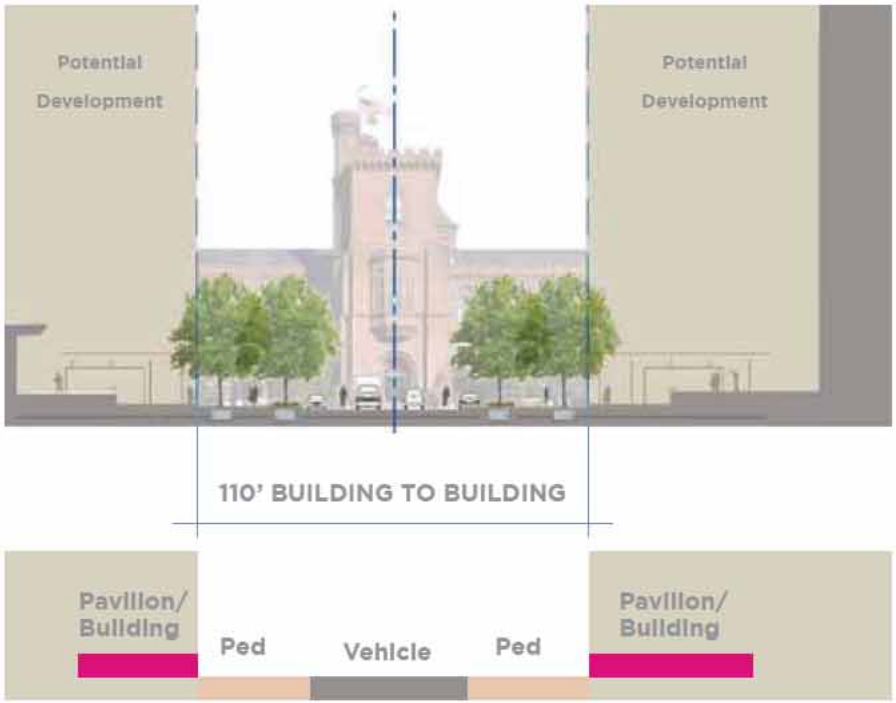
BOULEVARD

A boulevard with a large park-like median that prioritizes pedestrian activity along the primary central view corridor.



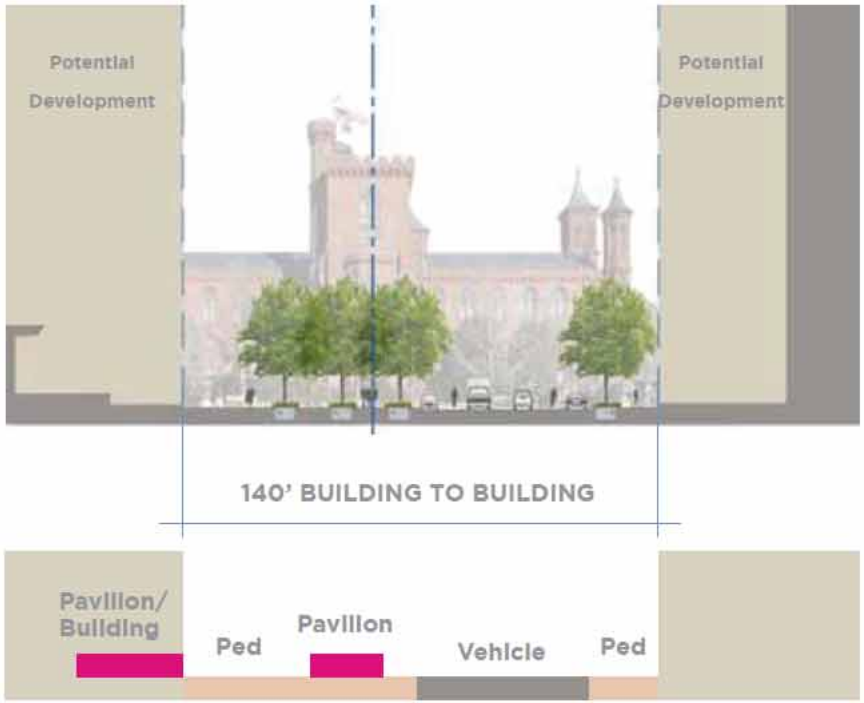
ROADWAY

A center roadway flanked by wide sidewalks, giving equal weight to motorized vehicles and pedestrians, reflects the section of a typical downtown city street.



PEDESTRIAN

An asymmetrical corridor that prioritizes the pedestrian-way along the primary view corridor and off-sets the roadway as a secondary corridor.



PRELIMINARY DESIGN CONCEPTS

BANNEKER PARK

Its location and designation as one of the top 20 future memorial sites in Washington makes Banneker Park the next preeminent national cultural destination. The 6.5 acre site can accommodate a significant memorial or a museum or a combination of museums and/or memorials situated within a signature landscape. This location will become an important civic feature and welcoming southern gateway to the National Mall. This landscape can offer intimate seating areas, water features, public art, and opportunities for commemoration on multiple levels.

The elevation of Banneker Park presents an opportunity to build a structure or feature on axis with the Smithsonian Castle. This would visually and programmatically extend the civic qualities of the National Mall and Smithsonian museums. This structure would also serve to extend this connection to the Washington Channel and East Potomac Park.

Banneker Park can be redesigned to improve vehicular and pedestrian circulation between the elevated park and Maine Avenue. An innovative landscape design incorporating stairs, ramps, and garden terraces can connect the 10th Street overlook and the waterfront at multiple locations. The important elements of the Kiley landscape can potentially be preserved, if determined eligible for the National Register of Historic Places or desirable to do so for other reasons.

The topography of Banneker Park also presents opportunities to unobtrusively incorporate a sewer-mining facility, or potentially a parking facility into the hill near the 12th Street Freeway ramp. However, a parking garage for cars or tour buses will likely prevent sponsors from considering the site for a future museum or memorial. In addition, bus routes must be designed so they do not traverse neighborhood streets.

These diagrams, illustrating a portion of the corridor, are intended to show a range of approaches and will be studied and developed in the next phase of work.

View from the Overlook at Banneker Park toward the Wharf and the Washington Channel on the Potomac River. (Hoffman-Madison Marquette)

EXISTING CONDITIONS STUDY MODEL (2012)

Banneker Park existing conditions.

POTENTIAL VIEW AXIS CONCEPTS MODELS

(Top image) - Potential development with buildings adjacent to the Southwest Freeway and expanded Overlook at south end of 10th Street.

(Lower image) - Potential development with buildings adjacent to the Southwest Freeway and vertical memorial at south end of 10th Street.

POTENTIAL MUSEUM BUILDOUT MODELS

(Top image) - Potential development with buildings adjacent to the Southwest Freeway and a building at the terminus of 10th Street.

(Lower image) - Potential development with buildings framing 10th Street, and fronting on Maine Avenue.

Maryland Avenue and 7th Street Corridors

View of Maryland Avenue from the southwest

(Top image) - Existing Conditions Study Model (2012)
(Lower image) - Recommended Development Scenario Study Model (2030)

REVITALIZATION OBJECTIVES

Establish Maryland Avenue as a prominent L'Enfant street with a series of civic spaces anchoring a new neighborhood. Expand transit capacity along the avenue and the 7th Street corridor, and improve Reservation 113 as a signature park at the center of a regional intermodal center.

Primary objectives for Maryland Avenue and the 7th Street corridors include:

- Accommodate freight rail and maximize commuter rail along the CSX corridor;
- Deck-over the existing railroad to establish Maryland Avenue and reconnect the street grid;
- Develop and program parcels along the corridor to establish a lively and balanced mix of uses;
- Protect and enhance the views to and from the U.S. Capitol;
- Design the avenue to feature a series of urban parks that extend the civic qualities of the National Mall;
- Design and program Reservation 113 to be a signature urban square and neighborhood park;
- Expand L'Enfant Station to maximize regional commuter rail capacity and design surrounding streets to accommodate enhanced transit use;
- Improve walkability and establish greater connection between all modes of transit; and
- Design L'Enfant Station to integrate it into the neighborhood and to complement Union Station and its civic purpose.

TODAY

Today, Maryland Avenue is a disconnected series of unimproved public spaces and street segments interrupted by a depressed active rail corridor, owned by CSX. The rail line is predominately used for transporting freight along the eastern seaboard. Passenger trains are limited. From the south, the rail line consists of two tracks over the Long Bridge, and three tracks that run through a short tunnel between 12th and 14th Streets which daylight within an open corridor between 9th and 12th Streets. Along this segment, there are oddly-shaped parcels of under-used land and buildings which turn their back to the corridor, establishing an industrial character.

The rail line borders Reservation 113, an unimproved park at the intersection of Maryland and Virginia Avenues and 7th Street. In this area, the tracks ascend and cross 7th Street and continue on an elevated track along Virginia Avenue, passing the Virginia Rail Express commuter rail platform between 6th and 7th Streets at L'Enfant Station. The single platform is not easily accessible or connected to adjacent transit services.

The corridor is framed by a mix of federal and private office buildings. There are no residential uses in proximity. Many of the federal buildings include internal employee-only cafeterias. A single office building at 600 Maryland Avenue, near the L'Enfant Plaza Metro Station, includes some retail concealed within the interior of the building.

Seventh Street is heavily used by commuter buses that traverse the length of the city between the southwest waterfront and Maryland. It is also one of the city's proposed streetcar corridors. The lack of trees and expansive pavement make walking across the freeway unpleasant. Beneath the rail trestle, minimal lighting, nesting birds, unsanitary conditions, and poor visual quality deter pedestrian activity.

CONSIDERATIONS

To establish the Maryland Avenue corridor, several considerations must be addressed.

CULTURAL FACILITIES

On axis with the U.S. Capitol, Maryland Avenue includes three important sites identified in the *Memorials and Museums Master Plan* for future commemorative works. Two are prime sites reserved for works of the highest national importance; one site is located at Reservation 113, and the other is the proposed President Dwight D. Eisenhower National Memorial at the intersection of Maryland and Independence Avenues. A third candidate site is located within the median near The Portals, a private development complex, between 12th and 14th Streets.

HISTORIC PRESERVATION

Reservation 113 and the streets that reflect the historic plan for the city of Washington are listed as contributing elements in the National Register of Historic Places. Although planned as prominent avenues, the portions of Maryland and Virginia Avenues that are located in the study area are considered non-contributing elements to the NRHP listing because of alternations made to the corridors when the rail line was constructed in the mid-1800s. Several of the buildings along the Maryland Avenue and 7th Street corridors were built during urban renewal in the mid-20th century and are nearing the threshold for consideration for inclusion in the NRHP. The Robert Weaver Federal Building (U.S. Department of Housing and Urban Development) was listed in the NRHP in 2008. The Wilbur Wright Buildings (Federal Aviation Administration) and the Lyndon B. Johnson Building (Department of Education) were determined eligible for listing in the NRHP in 2011. The DC State Historic Preservation Office may consider the Orville Wright Building and the GSA Regional Office Building eligible for listing.

Compliance with Section 106 of the National Historic Preservation Act will be required prior to the federal government implementing plans to alter, repurpose, or redevelop resources considered eligible for or listed in the NRHP.

HEAVY RAIL-FREIGHT AND COMMUTER RAIL

Within the study area, the CSX freight rail line shares its tracks with Amtrak and Virginia Rail Express (VRE). L'Enfant Station is VRE's top destination with about 7,375 daily riders or 40 percent of VRE total ridership. Amtrak passengers primarily board and disembark at Union Station, which is also the terminus for the Maryland Area Rail Commuter (MARC) service. VRE and MARC are either at or nearing their current daily ridership capacity. Both rail operators have identified the need to improve operations and to expand their service to meet ridership demands and projected growth. Ideally, MARC would extend service past Union Station into northern Virginia, providing a stop at L'Enfant Station. VRE has identified this as a long range option; however, it is not part of future expansion plans. The impacts, such as corridor constraints between Alexandria and Union Station, have not been studied or evaluated. While additional service will increase demands on the shared tracks, it will also have other benefits. It will provide access to jobs and cultural destinations, contribute to the regional economy, potentially reduce congestion at the Metro Center and Gallery Place Metro stations, and improve overall rider experience. Amtrak, VRE, and MARC are studying how to expand service at Union Station to accommodate increases in commuter and regional rail and high-speed rail service within the next 20 years.

CSX's National Gateway project proposes to improve the flow of freight between the Mid-Atlantic and the Midwest States. To increase the movement of freight through the corridor, CSX proposes to expand and upgrade tracks, equipment, and facilities. CSX proposes to reconstruct the Virginia Avenue tunnel and lower the tracks through the Maryland Avenue corridor to accommodate vertical clearance for double-stack rail cars. Although these projects will improve the movement of freight through the corridor, the two-track Long Bridge across the Potomac River will constrain the movement of freight and passengers. Therefore, the city is undertaking a Long Bridge expansion feasibility study to evaluate how to increase capacity through the corridor.

Improvement of the rail corridor provides the ability to increase the number of tracks and increase the vertical clearances. Increasing the vertical clearances will provide the opportunity to accommodate double-stacked trains and to deck the corridor and construct a new Maryland Avenue. Adding a fourth track will increase rail capacity, accommodate electrification of at least one track, and help separate freight trains and commuter trains to the extent possible through the District of Columbia. Adding this fourth track may require modifications to GSA's Regional Office Building, its southern side yard, and the Seventh Street bridge trestle.

Some of the constraints and competing needs to improve freight and commuter rail service within the area include:

- Bottlenecks caused by the corridor's constrained infrastructure: the limited two-track capacity across the Long Bridge and the limited three-track rail corridor; Long Bridge operating policies; and the single VRE platform at L'Enfant Station that requires two-way trains to share one track and a single-loaded platform to board and disembark passengers.
- Train propulsion methods (electric vs. diesel) and freight and passenger loads which require different infrastructure systems and design.
- Pedestrian transfer operations between systems (vertical and horizontal access) and access to trains and platforms (the number, length, and elevation of high and low platforms).

The L'Enfant Station entrances are located near or within the Maryland Avenue and 7th Street corridors. With four Metro rail lines —Green, Yellow, Orange, and Blue—converging at L'Enfant Plaza, it is one of the busiest stations in the system with 23,000 daily riders exiting during the weekday and 5,000 riders exiting on weekends. The Green Line is one of its heaviest used routes. The nearby Smithsonian Station—Orange and Blue Lines— logs an average of 16,000 riders exiting on a weekday. WMATA's 2040 Regional Transit System study considers a range of new lines, stations, and inner-line connections to add capacity to meet growing ridership demands on both track and station infrastructure. These improvements will help to relieve congestion on the Green Line and at L'Enfant Station and provide the opportunity to improve Metro access for residents and visitors south of the Southwest Freeway.

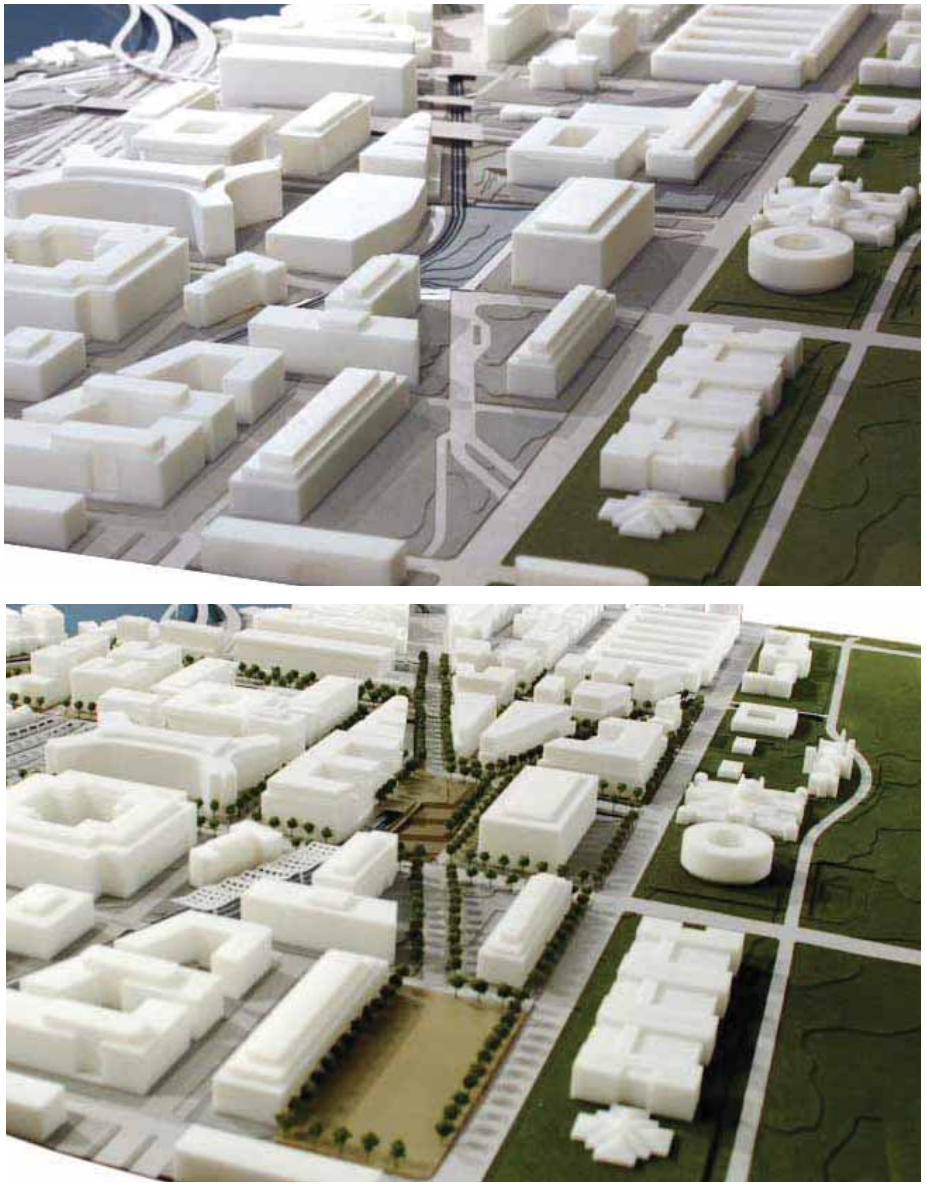
The number of transit services that converge in the study area and the proximity of L'Enfant Station to Union Station create an unparalleled opportunity to make L'Enfant Station a regionally important transit hub. There are two Metro entrances within a block and 7th Street is a surface transit corridor for local and commuter bus, as well as a planned dedicated streetcar line. In addition, the expansion of Amtrak service at Union Station will limit the ability for VRE and MARC to expand operations at Union Station. Therefore, improving L'Enfant Station to accommodate expanded VRE and MARC service will help to maximize regional commuter rail
transit capacity.

DECKING THE RAIL LINE TO ESTABLISH MARYLAND AVENUE

Establishing Maryland Avenue is a goal of the McMillan Plan and the Legacy Plan. It has been subject of serious study since the mid-1980s, kicked off by local architect Arthur Cotton Moore and later by NCPC and the District of Columbia Office of Planning.

These studies show that decking the rail line presents opportunities and challenges. It provides the opportunity to create a prestigious address for newly accessible parcels along the corridor, reconnect the street grid, as well as the ability to potentially construct subsurface parking. However, it will require innovative design to address life safety and ventilation considerations and to change the vertical profile of area streets and public spaces.

Some of the considerations include mitigating elevation changes at Reservation 113, at the GSA Regional Office Building, at the Orville Wright Building, and along 9th Street between Independence Avenue and D Street. In addition, the privately-owned building at the southeast corner of Maryland Avenue and 10th Street was constructed encroaching into the historic Maryland Avenue right-of-way. The alignment of Maryland Avenue will need to be adjusted in this area and provisions made to ensure that the building retains appropriate light and ventilation.



View of Maryland Avenue from the northeast

(Top image) - Existing Conditions Study Model (2012)
(Lower image) - Recommended Development Scenario Study Model (2030)

RECOMMENDATIONS

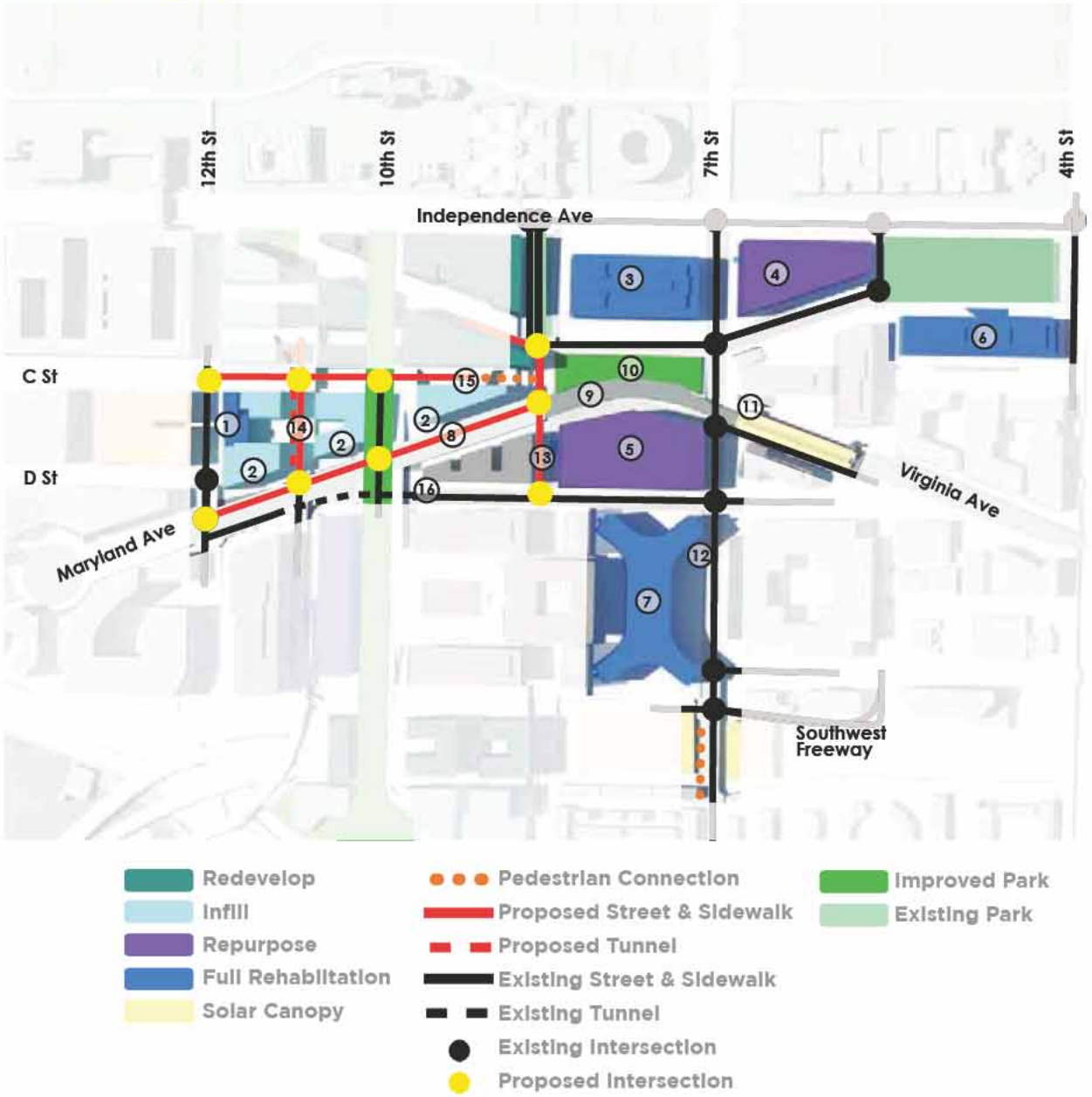
Leveraging improvements to the CSX rail corridor is a significant catalyst to reconstruct Maryland Avenue and create a new intermodal hub. This will support economic development by improving transit capacity, increasing real estate value, and improving access to a primary regional employment center. It provides the opportunity to establish a new neighborhood and workplace that is centered on the avenue and redevelops Reservation 113 as a signature urban park. A summary of the *Maryland Avenue, SW Small Area Plan* and the following matrix summarizes the recommendations for each parcel and street.

RESULTS

The Maryland Avenue and the 7th Street, SW corridor recommendations will:

- Establish Maryland Avenue as a new destination and a signature address for new residential, hotel, and office development.
- Create a new urban park at Reservation 113.
- Create a connected series of civic spaces along Maryland Avenue.
- Improve transit capacity within the region.
- Reestablish three intersections to improve walkability and mobility.
- Strengthen 7th Street as a local commuter route and increase access to transit to complement the expansion of L'Enfant Station.

SUMMARY PLAN



MARYLAND AVENUE AND 7TH STREET CORRIDORS - PROJECT RECOMMENDATIONS

		Summary Description	Phasing - Related Projects Near Term Projects (3-10 years) Long Term Projects (5-25 years) Coordination with Other Projects	Potential Partners * Federal - F District - D Private Sector - P Cultural - C
Building and Site Development				
1	Cotton Annex*	See Independence Quarter.	Coordinate with adjacent infill or redevelopment	F, D, P, C
2	GSA Parcels 1-3	See Independence Quarter.	Potential to coordinate with Forrestal Complex Redevelopment	F, D, P
3	FAA (Orville Wright Building)*	Rehabilitate the Orville Wright building to conserve energy and water use. Increase space efficiency to accommodate additional employees.	Coordinate with strategy for Wilbur Wright Building, and construction of Maryland Avenue, 9th Street, and C Street	F, D
4	FAA (Wilbur Wright Building) & GSA Parcel 4*	Repurpose the Wilbur Wright building and develop the infill parcel along Maryland Avenue for cultural or mixed-use development.	Coordinate with strategy for Orville Wright Building	F, P, C
5	GSA (Regional Office Building)*	Redevelop or build additional floors to maximize square footage and modify the floor plan to improve light and ventilation, and consider modifications to accommodate rail realignment. Consider changing the use to cultural or mixed-use development. Establish the building's main entrance to front on Reservation 113.	Coordinate with CSX re-alignment and Reservation 113 improvements	F, P, C
6	**Dept. of Education Building**	Rehabilitate Dept. of Education building to conserve energy and water use. Increase space efficiency to accommodate additional workers.	Near Term Project	F
7	HUD Building	Rehabilitate HUD to conserve energy and water use. Increase space efficiency to accommodate additional workers. Reconnect to the Central Utility Plant when feasible.	Near Term Project	F
Infrastructure, Streets, and Public Space				
8	Maryland Avenue	Deck the CSX rail between 9th and 12th Street to establish an important park-like boulevard with the civic decorum of L'Enfant's radial avenues. Minimize the physical and visual impacts caused by the varying grade changes and conditions along the Avenue. Design the avenue with a strong street wall that respects the historic 160-foot monumental viewshed to the U.S. Capitol. Maximize street network connections, and design a dignified and cohesive walkable streetscape that connects a series of signature civic spaces. Limit vehicular driveways to buildings. Maximize stormwater capture, filtering, and storage.	Near Term - Improve streetscape along existing road segments Long Term - coordinate with existing improvements	F, D, P, C
9	Rail Line Corridor	Realign the CSX rail line to accommodate a four track system to maximize the corridor's freight and passenger services carrying capacity for CSX, Amtrak, VRE, and potentially MARC. Consider opportunities for long-term electrification of the passenger rail lines for MARC and Amtrak service. Deck and design the rail line to minimize grade changes and inconsistent design conditions along the avenue. Incorporate piezoelectric energy harvesting technology into the rail corridor to showcase sustainable practices.	Near Term - Depress and realign rail Long Term - Deck and develop Maryland Avenue	F, D, P
10	Reservation 113***	Design a prominent urban square that supports L'Enfant Station and provides flexible space for commemorative works, community events, and passive recreation.	Coordinate with CSX Rail improvements	F, D, C
11	**Transit Enhancements**	Create an intermodal hub to support freight and commuter rail services for VRE and MARC. Lengthen and expand the number of platforms to increase transit capacity. Construct a photovoltaic canopy to provide shelter and contribute to district energy needs.	Near Term - Develop Implementation Strategy for long term improvements	F, D
		Construct three new Metro entrances at or near: (1) 7th Street just north of the freeway; (2) at the intersections of D and 7th Streets; and (3) at the intersection of Virginia Avenue and 6th Street.		
		Provide vertical and horizontal connections between the VRE platform, Metro station, and 6th and 7th Streets to enhance access for all modes of transit. Prioritize transit connections and pedestrian access along the 6th and 7th Street corridors.		
12	**7th Street**	Redevelop 7th Street into a retail corridor and intermodal commuter hub. Maximize the ability to accommodate bus, streetcar, bicycles, and vehicles to increase mobility for all modes of transport within and beyond the SW Ecodistrict. Improve the pedestrian connection at the rail underpass.	Near Term - Define interim improvements as part of long term enhancements	D
13	**9th Street (South of Maryland)**	Deck the I-395 tunnel ramps and build a street or a linear park and pedestrian connection between Maryland Avenue and D Streets, SW.	Coordinate with Maryland Ave	F, D
14	11th Street	Construct 11th Street between Maryland and Independence Avenues to improve mobility and provide access to buildings for daily functions (loading, parking, entries).	Coordinate with Forrestal Complex Redevelopment	F, D, P
15	**C Street**	Design C Street between 7th and 9th Streets to serve as an extension of the park at Reservation 113 while maintaining a cohesive link to Maryland Avenue. Design a pedestrian-friendly plaza at the Orville Wright Building to mitigate C Street grade changes.	Coordinate with Forrestal Complex Redevelopment, Maryland Avenue & Orville Wright rehab	F, D, P, C
16	D Street	Retain D Street as part of the street network and improve pedestrian connections between the lower level D Street and the elevated 10th Street.	Coordinate with 10th Street improvements	F, D
	All Projects	Construct and connect infrastructure systems and buildings to generate, convey, collect, store, and distribute thermal energy and recycled water throughout the district. Design and orient building footprints to maximize natural light and air ventilation.		F, D, P, C

***Partners will coordinate improvements but may not always be funding partners.**

****The potential effects of any alterations will be fully considered in the NHPA Section 106 process.**

MARYLAND AVENUE, SW SMALL AREA PLAN

The DC Office of Planning prepared the *Maryland Avenue, SW Small Area Plan* in coordination with the Southwest Ecodistrict Task Force and NCPC. The recommendations of this Focus Area incorporate and build upon the Maryland Avenue Plan recommendations.

The *Maryland Avenue, SW Small Area Plan* identifies the aspirations, complexities, and guidelines to be considered when revitalizing the avenue. The plan:

- Assesses the financial and physical feasibility of decking above the CSX rail line.
- Provides a guiding framework for the residential mixed-use development along the northern boundary of the avenue, as well as other opportunity sites along the avenue.
- Provides recommendations on how to improve the public realm and pedestrian experience, such as maintaining the 160 foot wide vista to the U.S. Capitol.
- Identifies the benefits associated with expanding transit opportunities around L'Enfant Station, in relation to Union Station and Long Bridge planning efforts.

The Maryland Avenue Plan concluded that the four infill development parcels adjacent to the avenue will not yield the development potential to pay for constructing the avenue or the number of residential units needed to create an adequate concentration for a residential community. The *SW Ecodistrict Plan* recommendations include areas for additional residential development that can help meet the District of Columbia's housing goals for this area as well as other opportunities to leverage federal and private funds to contribute to the construction of the avenue.

(Top image) Illustration of a park-like Maryland Avenue.

(Image above) Maryland Avenue Plan (w/key at right).

(Image at left) Section of the rail corridor lid supporting a new Maryland Avenue.

Images courtesy of DCOP, plans and illustrations by AECOM

Maryland Avenue SW Master Plan

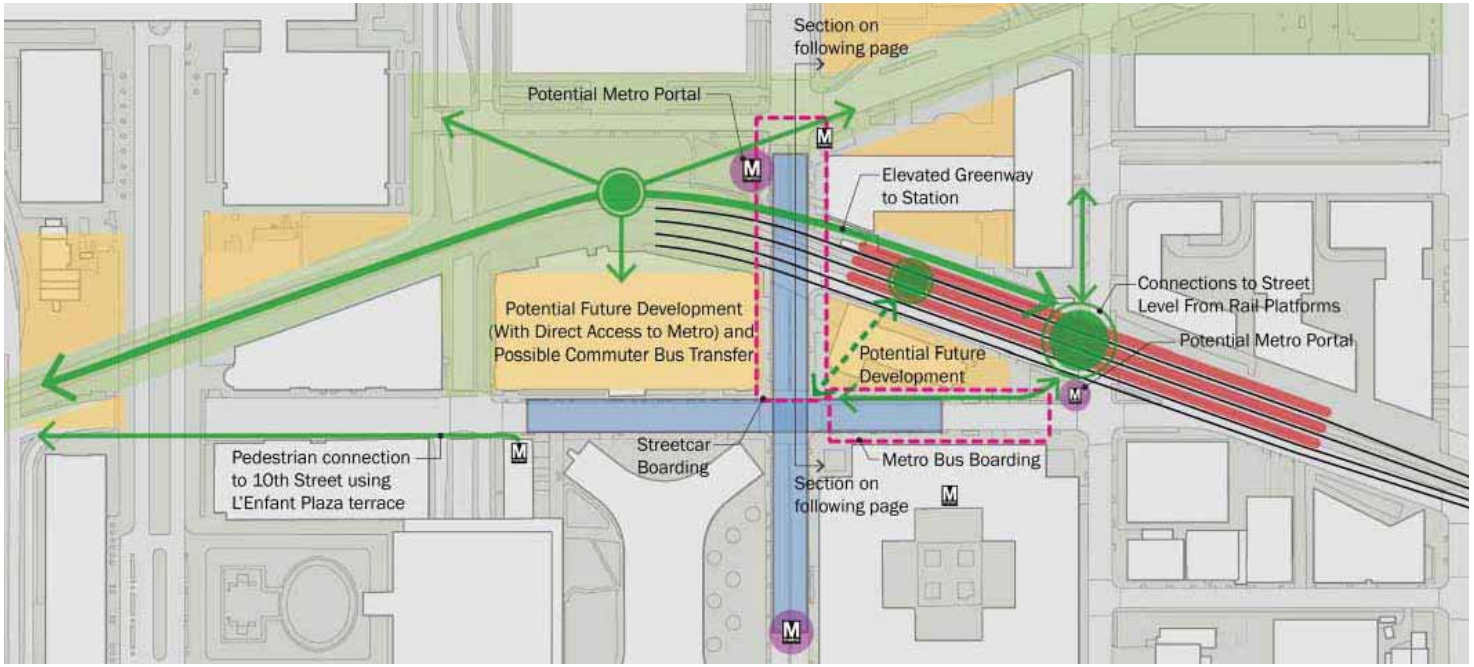
Illustration of proposed Maryland Avenue and potential adjacent infill/redevelopment

- Existing Buildings
- Potential redevelopment of the Forrestal Building - under study by NCPC
- Potential development along Maryland Avenue
- Existing Metrorail entrance

Potential Transit Connections

Diagram illustrating a potential scenario for intermodal transit connections. For study by WMATA and transit providers

- Existing Metro Portal
- Potential Metro Portal
- Pedestrian Node
- Potential New Development
- Underground Metro Rail Station
- Street level Metro Bus and Streetcar boarding areas
- Potential passenger platforms
- Railroad Tracks
- Primary pedestrian circulation
- Additional pedestrian connection associated with redevelopment



(Top image) Illustration of potential Intermodal connections.

(Image at right) Diagram of potential intermodal connections (key above).

Southwest Freeway

View of Southwest Freeway from the west

(Top image) - Existing Conditions Study Model (2012).
(Lower image) - Recommended Development Scenario Study Model (2030).

REVITALIZATION OBJECTIVES

Decking and developing the Southwest Freeway air-rights will contribute to the neighborhood's land use mix, add to the area's renewable energy supply, and improve connections between the National Mall and waterfront. Primary objectives at the Southwest Freeway are:

- Achieve a balance of office, residential, and institutional uses;
- Improve north-south and east-west pedestrian connections between the Ecodistrict and the adjoining neighborhoods;
- Increase opportunities for public-private development; and
- Buffer adjacent residential and office uses from the freeway.

TODAY

Today, the 10-lane Southwest Freeway and its ramps and frontage roads slice through the area. The north-south street grid between 4th and 12th streets has been elevated to span the freeway and ramps were added to access the surrounding streets, except for 10th Street. The freeway and the affiliated ramps are unattractive and create a physical and psychological barrier, making it difficult and unpleasant to travel the between the southwest waterfront and the National Mall.

CONSIDERATIONS

To develop atop the Southwest Freeway, several considerations must be addressed.

DECKING AND AIR-RIGHTS DEVELOPMENT

The freeway is a non-contributing element of the L'Enfant Plan of Washington. Decking the freeway and construction of new buildings and streets will restore the street grid and the block configuration established by the L'Enfant Plan, helping to improve north-south connectivity. A similar project is underway over the Center Leg Freeway, a segment of I-395 in Northwest Washington. In 2010, the District approved a two million sq. ft., $1.3 billion dollar office, residential, and retail project which will restore the original street grid to improve east-west connections.

Due to the elevation and grade changes, vertical distances between the freeway and overpasses vary greatly through the study area. Between 6th and 9th Streets, the vertical clearance will not accommodate a flush deck for new development. This deck must be elevated to maintain the vertical clearances along the freeway. Therefore, an option to install a solar canopy-like structure was explored.

Preliminary assessments indicate that the vertical clearance and the horizontal geometry between 9th and 12th Streets will accommodate a deck and the support system necessary for physical development utilizing air-rights above the freeway. Decking this area will require reconfiguring the freeway entry/exit ramps into urban interchanges. It will also provide an opportunity to construct new east-west streets to link 9th and 10th Streets and provide access to the new development.

Example Projects

(Top) - Park atop Freeway in Seattle, WA

(Middle) - Railway tunnel with solar panels adjacent to freeway in Antwerp, Belgium

(Bottom) - proposed Capitol Crossing project over I-395 in Washington, DC (Property Group Partners)

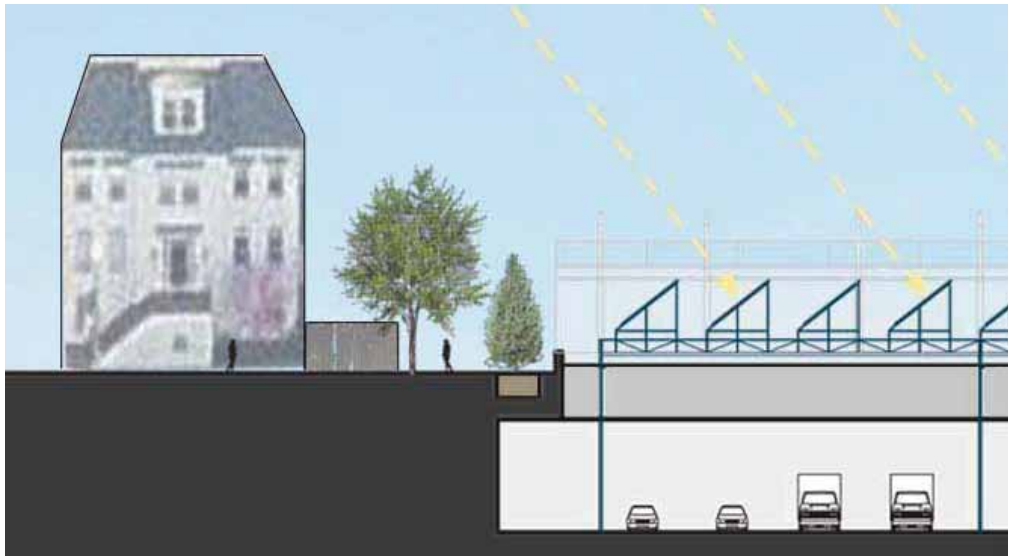
SOLAR CANOPY - PRELIMINARY CONCEPTUAL SECTIONS

9th

7th

(Top) - Section through Southwest Freeway from south to north.

(Bottom) - Section through Southwest Freeway and solar canopy between 9th and 7th Streets.



SOLAR CANOPY

The rear yards of the row houses at Capital Square are bordered to the north by the Southwest Freeway. Installation of trees and a glare-resistant solar canopy could buffer vehicular noise, and provide a source of renewable energy for the SW Ecodistrict.

Installation of a solar canopy will also support construction of new east-west pedestrian connections between 7th and 9th Streets, and expand and landscape the north-south sidewalks across 7th Street and a portion of the 9th Street bridges.

(Top) - Enlarged section at south edge of canopy.

(Bottom) - Enlarged section through 7th Street showing enhanced pedestrian connections.

RECOMMENDATIONS

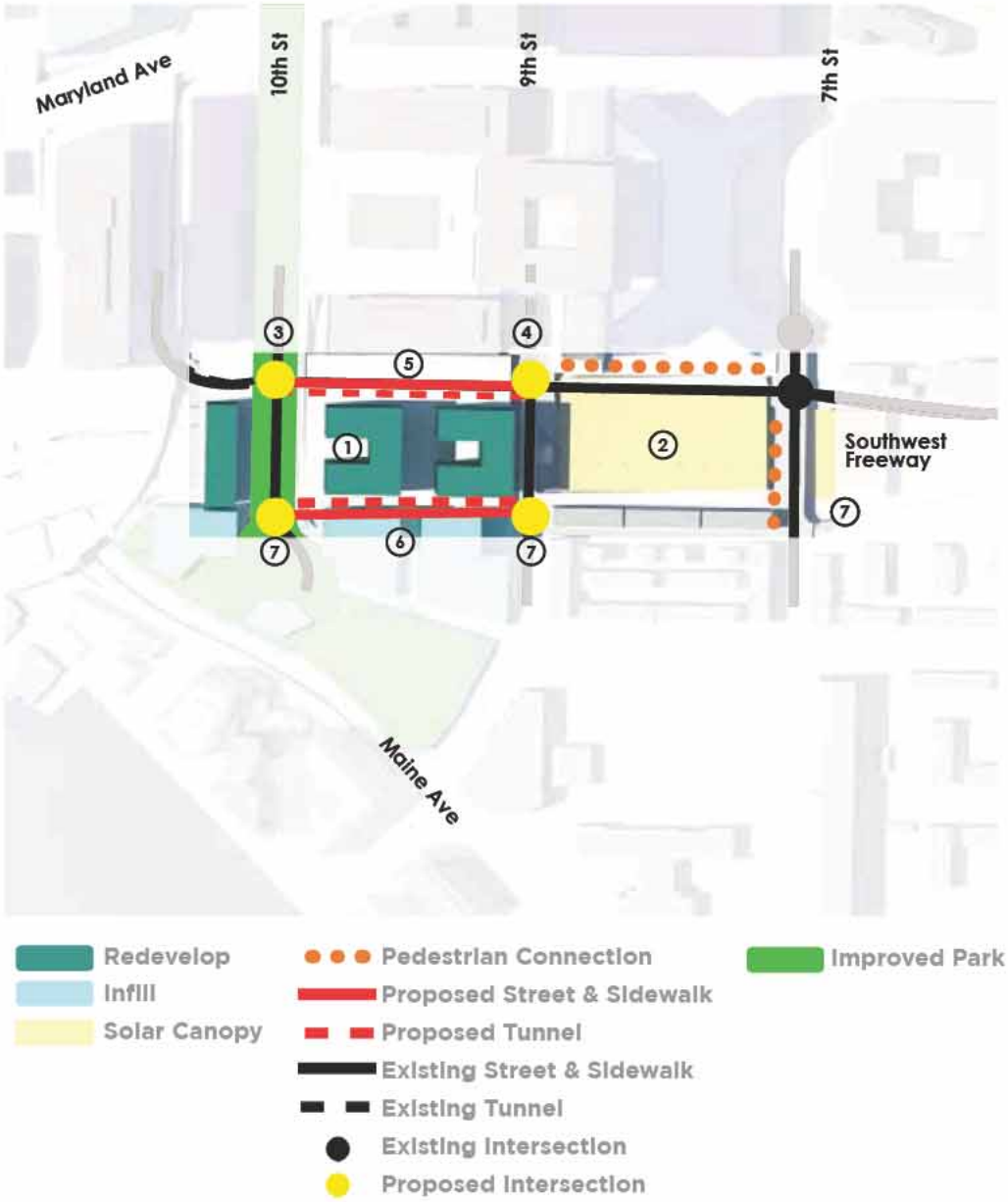
The Southwest Freeway air-rights will be attractively positioned for new private development and will contribute to improving the mix of uses. This will also help establish Banneker Park as a cultural destination and connect the SW Ecodistrict to adjoining neighborhoods. New landscaping and a solar canopy can buffer the Southwest Freeway and improve pedestrian connections. The matrix summarizes the recommendations for each parcel and street.

RESULTS

The Southwest Freeway recommendations will:

- Yield more than 950,000 sq. ft. of new space to accommodate places to live, work, and visit.
- Improve walkability along 10th Street between the National Mall, Smithsonian museums, and Banneker Park.
- Improve north-south and east-west pedestrian connections for residents, workers, and visitor traveling between Maine Avenue, L'Enfant Plaza, Metro stations, and the National Mall.
- Increase the capacity to use solar power as a renewable energy source.
- Increase the efficiency of the central utility plant by improving the use mix to balance energy loads.

SUMMARY PLAN



SOUTHWEST FREEWAY - PROJECT RECOMMENDATIONS

		Summary Description	Phasing - Related Projects Near Term Projects (3-10 years) Long Term Projects (5-25 years) Coordination with Other Projects	Potential Partners* Federal - F District - D Private Sector - P Cultural - C
Building and Site Development				
1	**Air-Rights Development**	Deck over the Southwest Freeway with new mixed-use private development between 9th Street and the 12th Street ramp.	Long Term - redevelop site	F, D, P
Infrastructure, Streets and Public Space				
2	**Solar Canopy**	Construct a non-glare solar panel canopy over the Southwest Freeway between 7th and 9th Streets. The canopy shall be designed with edges buffered from adjacent streets and neighborhood with green plantings to prevent negative visual impacts and vandalism.	Near Term - Develop demonstration project	F, D, P
3	10th Street	Enhance streetscape and prohibit vehicular driveways to buildings on 10th Street frontage.	Near Term - Develop interim streetscape enhancements Long Term - Incorporate streetscape improvements with air-rights development	F, D, P
4	9th Street	Redesign the 9th Street and I-395 interchange to accommodate new development and improve vehicular and pedestrian access over the highway to L'Enfant Plaza.	Coordinate with air-rights development	F, D, P
5	**E Street/ Frontage Road**	Construct a new E Street above the frontage road to create an at-grade vehicular and/or pedestrian connection between 7th and 10th Streets to improve access between SW neighborhoods and the study area.	Coordinate with air-rights development	F, D, P
6	F Street	Construct a new F Street to connect 9th and 10th Streets and provide access to air-rights development.	Coordinate with air-rights development	F, D, P
7	7th, 9th and 10th Street **Freeway Bridges**	Improve the 7th, 9th, and 10th Street freeway spans to accommodate planting area that will buffer the freeway and enhance the pedestrian experience.	Coordinate with solar canopy and air-rights development	F, D, P
	Freeway Ramps	Design freeway access ramps as urban intersections to connect to the street grid, allow air-rights development, and reduce the freeway's footprint.	Coordinate with air-rights development	F, D, P
	All Projects	Construct and connect infrastructure systems and buildings to generate, convey, collect, store, and distribute thermal energy and recycled water throughout the district. Design and orient building footprints to maximize natural light and air ventilation.		F, D, P, C

***Partners will coordinate improvements but may not always be funding partners.**

THE SW ECODISTRICT WILL BE LED BY ECONOMICALLY SUCCESSFUL PARTNERSHIPS